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Patent Claims

1. A device for producing large packs having a plurality of objects as pack contents, in particular folded boxes (10) for cigarette bundle packs (12), the objects or bundle packs (12) being fed to a box packer (14) and, with the formation of a pack group (19) as box contents, it being possible to introduce them into the folded box (10) and it being possible to feed the filled and closed folded boxes (10) to a palleting station (29) for transfer to a pallet (11), characterized in that the box packer (14) and the palleting station (29) form one technical unit, the box packer (14) being arranged directly in front of the palleting station (29).

2. The device as claimed in claim 1, characterized in that the box packer (14) is adjoined by a closure unit for the boxes (10), namely a closing station (25), in particular for attaching adhesive tapes (27) to folding tabs (22) of the box (10), and in that the closing station (25) is adjoined directly by the palleting station (29).

3. The device as claimed in claim 1 or 2, characterized in that the boxes (10) which are fed to the palleting station (29) can be deposited in the region of a box receptacle (32) directly adjacent to the box packer (14) or to the closing station (25), and can be removed from the box receptacle (32) by a lifting member, in particular a portal robot (37), and can be deposited on an adjacently positioned pallet (11).

4. The device as claimed in claim 3 or one of the further claims, characterized in that the palleting

station (29) with the box packer (14) and optionally the closing station (25) has an outline shape which is L-shaped or U-shaped, it being possible for the pallets (11) to be displaced transversely with respect to the feeding direction of the boxes (10) in the region of the palleting station (29).

5. The device as claimed in claim 3 or one of the further claims, characterized in that the boxes (10) bear against a stop (34, 35) in the region of the box receptacle (32), and in that the stop (34, 35) can be moved out of the stop position for conveying boxes (10) away in a continuation of the feeding direction, in particular when determining faulty boxes.

6. The device as claimed in claim 3 or one of the further claims, characterized in that the box receptacle (32) is dimensioned for the simultaneous accommodation of at least two boxes (10) lying next to one another in the conveying direction, each box (10) being assigned a stop (34, 35), and it being possible for the boxes (10) to be removed from the box receptacle (32) alternately or one after another by the portal robot (37).

7. The device as claimed in claim 5 or one of the further claims, characterized in that an end stop (35) of the box receptacle (32) is configured as a section of a conveying track, in particular a roller track, and is connected pivotably to the box receptacle (32), in such a way that the end stop (35) can be moved into a conveying position and in the process forms a bridge between the box receptacle (32) and an adjacent discharge conveying path (36) for transporting boxes (10) through the palleting station (29).

8. The device as claimed in claim 3 or one of the further claims, characterized in that the portal robot (37) has a projecting carrying arm (39) which is

mounted on one side and on which a lifting head (38) for gripping a box (10) can be moved in the longitudinal direction, the carrying arm (39) preferably pointing in a direction parallel to the feed direction of the boxes (10).

9. The device as claimed in claim 8 or one of the further claims, characterized in that the carrying arm (39) can be moved (exclusively) on a loadbearing frame which is arranged eccentrically, namely at the edge of the palleting station (29), transversely with respect to the feed direction of the boxes (10), in particular with a vertical loadbearing column (43) on carrying beams (47, 48) which are arranged one above another and extend horizontally.

10. The device as claimed in claim 9 or one of the further claims, characterized in that the carrying arm (39) is mounted on the loadbearing column (43) such that it can move up and down.

11. The device as claimed in claim 3 or one of the further claims, characterized in that the pallets (11) which are to be loaded and loaded pallets (11) can be moved transversely with respect to the feed direction of the boxes (10) in the region of the palleting station (29), in particular in such a way that empty pallets (11) can be displaced in a feed plane below the box receptacle (32) into a loading position next to the box receptacle (32) and can be moved out of the palleting station (29) in the same direction after loading.

12. The device as claimed in claim 1 or one of the further claims, characterized in that the box packer (14), optionally the closing station (25) and the palleting station (29) are connected to a common controller, in particular to a common switch cabinet (52) and/or a common control device (53).